

**SECTION D**  
**CATEGORICAL EXCLUSION (CX) DETERMINATION RFO/CX031-92**

**Proposed Action:** Site Wide Treatability Study

**Location:** Rocky Flats Plant, Golden, CO

**Proposed by:** U.S. Department of Energy, Rocky Flats Office

**Description of the Proposed Action:**

Rocky Flats Office proposes to conduct a Sitewide Treatability Study to characterize contaminants on the plant site. The Sitewide Treatability Study would be a three-year program consisting of the laboratory testing of 10 remediation technologies. Tests would be conducted inside laboratories using quantities of sample material and agents that would fit into conventional laboratory beakers and jars. Studies on this small scale are often referred to as laboratory-scale or bench scale studies, in distinction to pilot-scale or full scale studies involving much larger samples, larger equipment and testing in the field.

All testing would take place within state certified laboratories approved to work with the hazardous and radioactive substances involved and which have the necessary local, state and federal permits for their operations. Laboratories used may be located at RFP (the 881 Building analytical laboratory), commercial laboratories, at other DOE facilities such as the Nevada Test Site or Los Alamos National Laboratory. In the case of the two proprietary technologies, tests would be conducted at a vendor's laboratory. In all cases, compliance by the laboratory with all applicable regulations would be verified prior to initiation of work by that laboratory. By virtue of working with qualified laboratories, no non-permitted release of hazardous or radioactive materials from laboratories to the environment is expected to occur during the course of the study. Because of the indoor, highly-controlled nature of the planned studies, no impacts to the natural environment are anticipated beyond the removal of small amounts of contaminated soil and water.

The laboratory procedures that would be used in testing the effectiveness of these technologies on the contaminated soil and water samples are all routine procedures associated with conventional laboratory operation. The technologies that would be tested during the study are:

1. Adsorption
2. Ion Exchange
3. Magnetic Separation
4. Reduction/Oxidation
  - a. Oxidation/precipitation
  - b. Stannous chloride reduction
  - c. Sulfur dioxide/metabisulphite reduction
  - d. Ferrous sulfate reduction
5. Physical Separation
6. Soil Washing
7. Solidification/Stabilization
8. Tru-Clear™
9. Tru-Clean™
10. Ultrafiltration/Microfiltration

Transportation and storage of samples from the collection points to the laboratories would be in accordance with Department of Transportation, DOE and RFP regulations and standard operating

procedures for such activities. Movement may be by private or common carrier according to the regulations applicable to the particular contaminant and the needs of the study.

Water samples would be collected from existing wells and surface water sampling locations in OUs 1 (881 Hillside Area), 2 (903 Pad Area), 3 (Off Site Areas), 4 (Solar Evaporation Ponds), 5 (Woman Creek), 6 (Walnut Creek), and/or 7 (Present Landfill), and the South Interceptor Ditch. Total volume of water samples planned to be collected during the study is approximately 300 gallons. Samples would be taken throughout the study. Appropriate RFP standard operating procedures for obtaining ground water or surface water samples would be followed.

It may be necessary to drill new water sampling wells if samples of adequate size and quality cannot be obtained from existing boreholes, but this is not expected to be necessary. If new wells are required, they would be drilled with standard drilling rigs of the type commonly used at RFP for site characterization and similar work. Drilling a well or borehole involves driving a drilling rig to the site and drilling the hole, usually within a day. Holes are typically 15- to 60-feet deep. As the drill bit advances, cuttings/core samples are brought to the surface. The material required for the sample is preserved in an appropriate container. Other material would be shoveled into drums and stored pending characterization and appropriate disposal.

Soil samples would be gathered from OU 1 or OU 2 or both. Soil samples would typically be gathered by hand-held shovel from the top 10-to-20 centimeters of the ground. Boreholes or backhoes may be used if the appropriate quality of samples cannot be obtained by shovel. Total volume of soil samples planned to be collected during the study is approximately 1,650 gallons, or thirty 55-gallon drums. Appropriate RFP standard operation procedures for obtaining soil samples would be used, regardless of the sample gathering method used.

All unused samples and test spoils from the laboratories would be returned to RFP for appropriate storage or disposal in accordance with RFP standard operating procedures. No unused samples or test spoils would remain at a laboratory or be otherwise disposed of other than by return to RFP.

#### **Categorical Exclusion to be applied:**

B3.1 Site characterization and environmental monitoring, including siting, construction, operation, and dismantlement or closing (abandonment) of characterization and monitoring devices and siting, construction, and operation of a small-scale laboratory building or renovation of a room in an existing building for sample analysis. Activities covered include, but are not limited to, site characterization and environmental monitoring under CERCLA and RCRA. Specific activities include, but are not limited to: (f) Sampling and characterization of water, soil, rock, or contaminants. (10 CFR 1021, Appendix B to Subpart D)

B3.6 Indoor bench-scale research projects and conventional laboratory operations (for example, preparation of chemical standards and sample analysis) within existing laboratory facilities.

**DOE NEPA REGULATIONS SECTION D**  
**CATEGORICAL EXCLUSION DETERMINATION - RFO/CX031-92**  
Site Wide Treatability Study

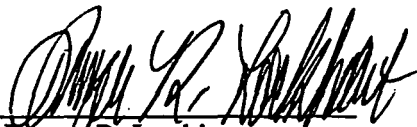
I have determined that the proposed action meets the requirements for a categorical exclusion as defined in the Section D of 10 CFR 1021. Therefore, I approve the categorical exclusion of the proposed action from further NEPA review and documentation.

Date: 8/4/92

Signature:   
Terry A. Vaeth  
Title: Manager, Rocky Flats Office

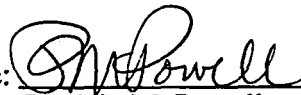
Project Sponsor:

Date: 7/30/92

Signature:   
Frazer R. Lockhart  
Title: Director, Environmental Restoration Division

I have reviewed this determination and find that a categorical exclusion is the appropriate level of NEPA documentation.

Date: July 29, 1992

Signature:   
Patricia M. Powell  
Title: NEPA Compliance Officer

ADS number: 1012 (EM)  
EC8692